

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

New claims 44-56 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-7 and 17-56 are now pending in this application.

Rejections under 35 U.S.C. § 103

Claims 1, 4, 6, 7, 19-23, 26, 31-36, and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,538,676 (hereafter “Bielfeldt”) in view of U.S. Patent No. 3,915,075 (hereafter “Luke et al.”) and U.S. Patent No. 4,933,125 (hereafter “Reiniger”). This rejection is respectfully traversed.

Embodiments described in Applicant’s invention advantageously provide a method for the continuous manufacture of wood material boards having a textured surface on at least one side in which the life of a metal mesh belt is extended, damage to steel bands and/or the metal mesh belt is prevented by minimization of relative movements during pressing, a heat flow from heating plates to a material mat is improved, and press time during production of boards is reduced.

Bielfeldt discloses a process for the continuous production of particleboards that includes a woven metal wire belt 2, a preheating zone 8, a continuously operating press 1 that includes a movable press ram 12 and fixed press table 13, and a covering hood 11 arranged in the preheating zone 8. See Bielfeldt at col. 4, lines 16-35. The Office argues on page 3 of the Office Action that the press ram 12 and the press table 13 form an insulating tunnel.

However, the Office does not provide a basis for why the press ram 12 and press table 13 would form an insulating tunnel or have the property of reducing heat by thermal radiation. Moreover, even if one of ordinary skill in the art would consider the area formed between the press ram 12 and table 13 of Bielfeldt as an insulating tunnel, this area is not located where a metal mesh belt and corresponding steel belt pass through on a return run because this area is located within the press 1 and between the press ram 12 and table 13. Therefore, Bielfeldt does not disclose or suggest a method “wherein the metal mesh belt and the corresponding steel belt are configured to pass through an insulating tunnel, in a return run, to reduce heat loss by thermal radiation.”

The Office argues on pages 3-4 of the Office Action that “unless the method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt.” However, the Office does not provide a basis in the prior art for why it would have been obvious to heat a metal mesh belt to a temperature that is 40 degrees Celsius higher than the temperature of the steel belt. Moreover, Bielfeldt does not disclose or suggest a metal mesh belt comprising “a material having a thermal conductivity considerably higher than that of the corresponding steel belt,” as noted on page 3 of the Office Action.

Luke et al. discloses an apparatus for making plastic rods, such as a rod for tobacco-smoke filtering material. See Luke et al. at col. 1, lines 6-9. Luke et al. discloses that a rod 13 is extruded from a die 20, conducted through a tube 20a made of a high thermal conductivity material, and introduced between a belt 1 and a tape 12 that wraps around the rod 13. See Luke et al. at col. 2, line 27, to col. 3, line 3. Luke et al. discloses that the belt 1 can be made of rubber and that instead of a tube 20a a wire-mesh belt of high conductivity material can be provided. See Luke et al. at col. 2, lines 31-37; col. 3, lines 3-4. The Office argues on page 3 of the Office Action that Luke et al. discloses a wire mesh belt comprising “a material having a thermal conductivity considerably higher than that of the corresponding steel belt,” citing the wire-mesh belt disclosed by Luke et al. However, the wire-mesh belt disclosed by Luke et al. replaces the tube 20a, as shown in Figure 3 of Luke et al. In other words, the wire-mesh belt of Luke et al. essentially acts as a conveyor upstream of, and outside of, the area where the rod 13 is contacted by the belt 1 and the tape 12. Therefore, the

wire-mesh belt of Luke et al. is not configured to circulate with a steel belt around a frame part of a continuously operating press.

Reiniger discloses a process for making cellulose-containing products that includes a conveyor belt 22, a pressure shoe 32, a suction box 34, conveyor belt 42, and press reactor 10 that includes an upper die 46 and a lower die 48. See Reiniger at col. 7, lines 40-68; col. 8, lines 6-26. However, Reiniger fails to disclose a wire mesh belt comprising “a material having a thermal conductivity considerably higher than that of the corresponding steel belt.” Nor does Reiniger disclose or suggest a metal mesh belt that is configured to circulate with a steel belt around a frame part of a continuously operating press.

It would not have been obvious to one of ordinary skill to modify the process of Bielfeldt by the teachings of Luke et al. and Reiniger to make the process of claims 1, 19, and 31. It would not have been obvious to one of ordinary skill in the art to look to the teachings of Luke et al. when selecting a material for a wire-mesh belt because the wire-mesh belt of Luke et al. is not configured to circulate with a corresponding belt around a frame part of a continuously operating press. The wire-mesh belt does not pass between the belt 1 and tape 12 of Luke et al, nor does it pass through a continuous press with belts. Nor does the process of Luke et al. use steel belts and involve the issues inherent with such belts. The process of Luke et al. and the wire-mesh belt of Luke et al. are significantly different than that of Bielfeldt. Therefore, it would not have been obvious for one of ordinary skill to look to the teachings of Luke et al. when selecting a material for the belt of Bielfeldt because the process of Luke et al. is widely divergent from the process and concerns of Bielfeldt. Reiniger fails to remedy the deficiencies of Bielfeldt and Luke et al. Nor would one of ordinary skill have had a motivation to modify the process of Bielfeldt by the teachings of Luke et al. and Reiniger.

Furthermore, the process of Luke et al. is used to produce rods of plastic material, not wood material boards. A basic requirement of a *prima facie* case of obviousness is a reasonable expectation of success. See M.P.E.P. §§ 2143, 2143.02. Because the processes of Bielfeldt and Luke et al. produce widely different materials that entail different concerns, one of ordinary skill would not have had a reasonable expectation of success in applying the

teachings of Luke et al. to the process of Bielfeldt. Therefore, it would not have been obvious to one of ordinary skill to modify the process of Bielfeldt by the teachings of Luke et al.

For at least the reasons noted above, withdrawal of this rejection is respectfully requested.

Claims 2, 3, 5, 18, 24, 25, 27, 28, 30, 37, 38, 40, 41, and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bielfeldt, Luke et al., and Reiniger as applied to claim 1, above, and further in view of U.S. Patent No. 5,762,980 (hereafter “Bielfeldt ‘980”). This rejection is respectfully traversed. Bielfeldt ‘980, which is cited only for a teaching of heating a mesh belt to a specific temperature profile, fails to remedy the above-noted deficiencies of Bielfeldt, Luke et al., and Reiniger. Withdrawal of this rejection is respectfully traversed.

Claims 17, 29, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bielfeldt, Luke et al., and Reiniger as applied to claim 1, above, and further in view of the Background section of Applicant’s specification. This rejection is respectfully traversed.

The Background section of Applicant’s specification discloses that a steel belt and mesh belt can be made of high-alloy stainless steel. See paragraph 0008 of specification. Therefore, the Background section of Applicant’s specification does not disclose or suggest that a metal mesh belt comprises at least two materials because this section only discloses a metal mesh belt made of a single material. A basic requirement of a *prima facie* case of obviousness is that a prior art reference, or references when combined, must teach or suggest all the claim limitations. See M.P.E.P. §§ 2143, 2143.03. Bielfeldt, Luke et al., Reiniger, and the Background section of Applicant’s specification, alone or in combination, fail to disclose or suggest a metal mesh belt that comprises at least two materials. Therefore, it would not have been obvious for one of ordinary skill to modify the process of Bielfeldt, Luke et al., and Reiniger to provide a metal mesh belt that comprises at least two materials. Nor would one of ordinary skill have had a motivation to make such a modification. Withdrawal of this rejection is respectfully requested.

New Claims 44-56

New claims 44-56 depend upon claims 1, 19, and 31 and are allowable over the prior art for at least the reasons noted above.

Claims 44-46 find support in the specification in paragraph 0027. These claims further recite “wherein the thermal conductivity of the metal mesh belt is at least 70% greater than the thermal conductivity of the steel belt.” Applicant submits that the prior art references, alone or in combination, fail to disclose or suggest all of the features of claims 44-46.

Claims 47-49 further recite “wherein the metal mesh belt comprises cast steel and stainless steel.” Applicant submits that the prior art references, alone or in combination, fail to disclose or suggest all of the features of claims 47-49.

Claim 50 further recites the use of a heating roll. Applicant submits that this feature is not disclosed or suggested by the prior art references.

Claims 51-53 further recite “wherein the insulating tunnel is arranged outside of an area formed between the upper and lower frame parts of the continuously operating press.” As noted above, the Office argues that the press 12 and table 13 form an insulating tunnel. Therefore, the prior art references, alone or in combination, fail to disclose or suggest all of the features of claims 51-53.

Claims 54-56 further recite “further comprising the step of preheating the mat in a preheating device located upstream of the continuously operating press.” However, the prior art references, including Bielfeldt, do not disclose or suggest both a heating tunnel and a preheating zone.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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